

(12) UK Patent Application (19) GB (11) 2 032 831 A

(21) Application No 7934647

(22) Date of filing 5 Oct 1979

(23) Claims filed 5 Oct 1979

(30) Priority data

(31) 7811005

(32) 23 Oct 1978

(33) Sweden (SE)

(43) Application published
14 May 1980

(51) INT CL³

E01H 1/12 B65F 1/00

(52) Domestic classification

B4W 6E

(56) Documents cited

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(58) Field of search

A1B

B4W

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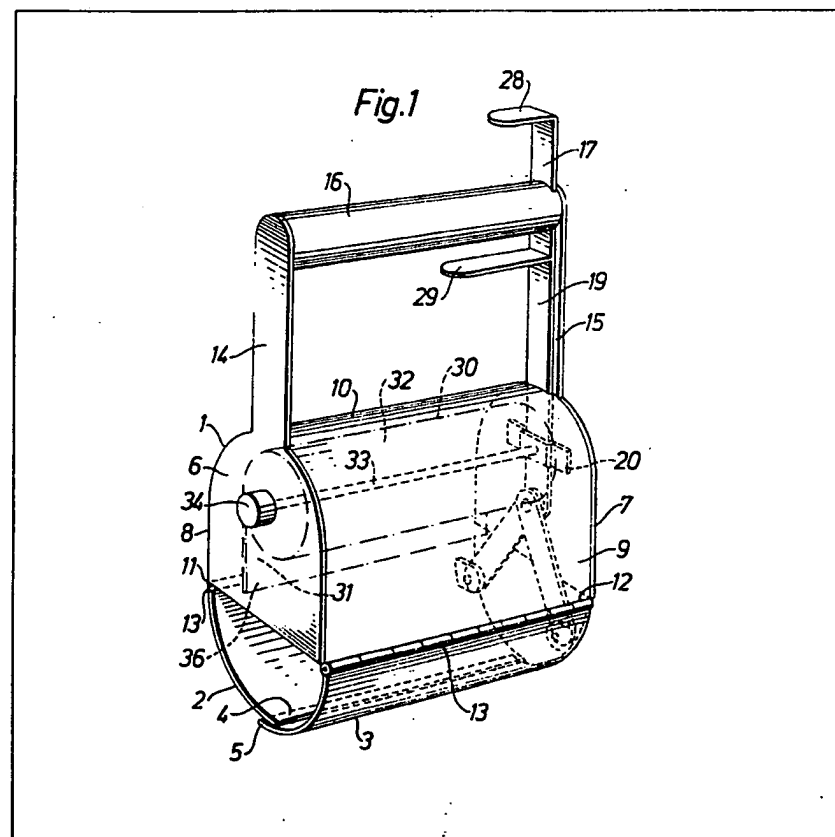
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(54) A sanitary device for picking up animal excrement

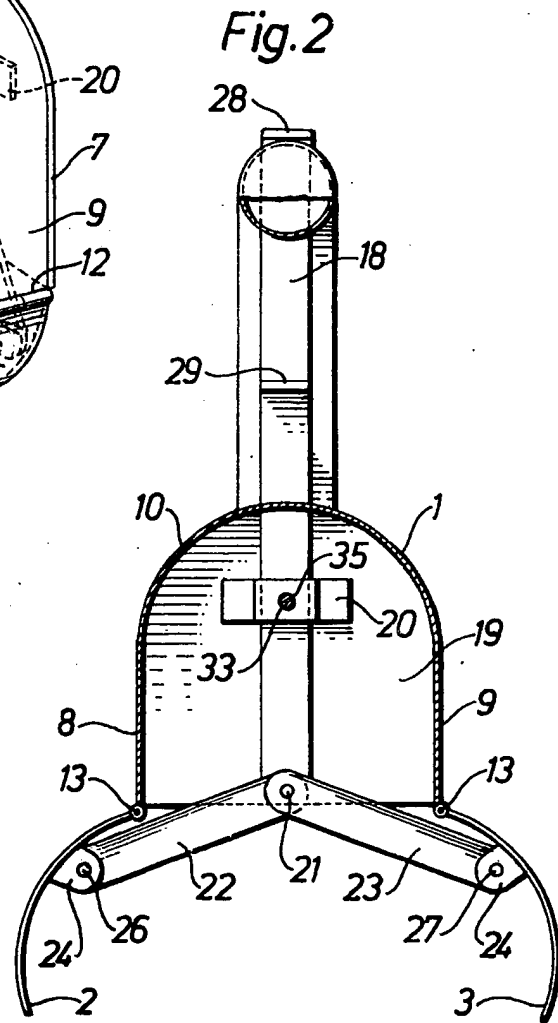
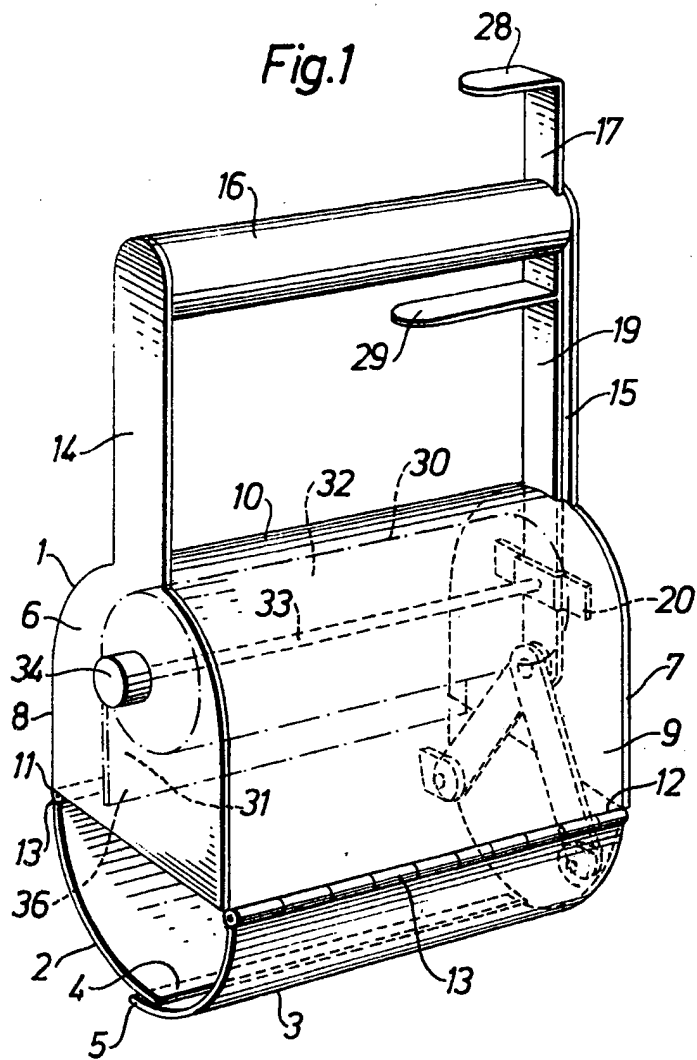
(57) A frame (1) is provided with a handle (16) and two movable gripping members (2, 3) cooperating with each other and journaled on the frame by means of separate hinged joints (13). The gripping members (2, 3) are

arranged to be pivoted by means of a special operating mechanism with a link system which opens and closes the device. The mouth of a bag may be engaged with the gripping members, when open, to enable excrement to be cleanly placed within the bag by placing the device over the excrement and closing the gripping members.



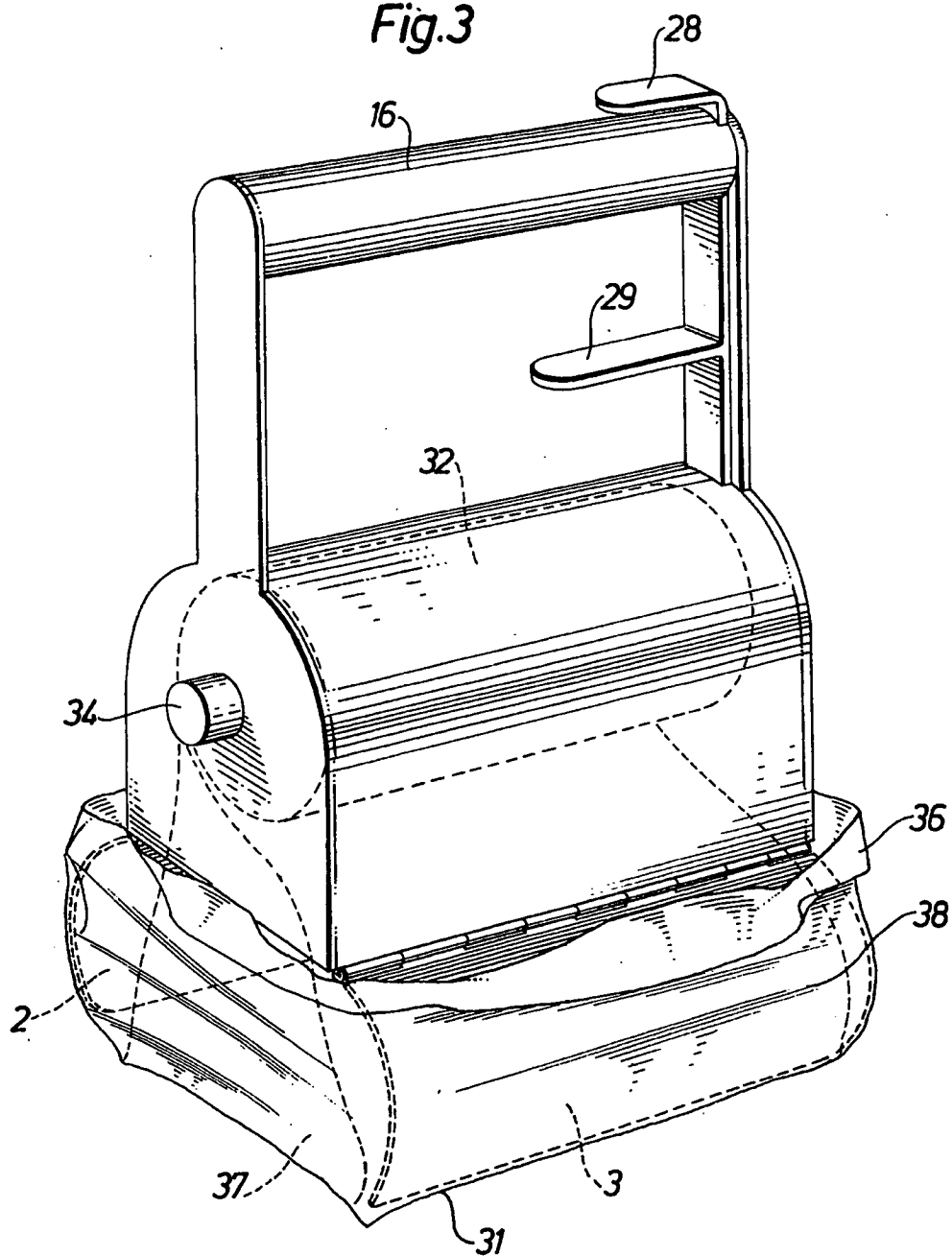
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Fig.3



SPECIFICATION

Improvements in or relating to a sanitary device

The present invention relates to a sanitary device for picking up animal excrement.

- 5 Exercising animals, particularly dogs, presents certain problems, especially when the animals are exercised within built-up areas and in public places. In view of the extensive pollution caused by animal excrement left on pavements, streets, 10 lawns and so on. One of these problems is the high extra costs falling upon local authorities in connection with the removal of such droppings from the subsequent clearing of pavements and the like. Another well known problem is the risk of 15 slipping, particularly when older people happen to tread in such dog droppings. An equally great problem is the pollution of shoes when a person inadvertently treads in a dog dropping particularly as the droppings may cling to shoes for a time 20 leading to the pollution of floors, carpets, and the like in houses and cars subsequently entered by the person with the contaminated shoes, which is often the result of such involuntary and unpleasant contact with dog droppings.

- 25 There has therefore long been an urgent need for a satisfactory solution to all these problems.

It is therefore an object of the present invention to provide a sanitary device which can easily be carried and which can be manipulated in a simple 30 and reliable manner for picking up animal excrement to facilitate disposal thereof.

- According to this invention there is provided a sanitary device for picking up animal excrement in a bag, said device comprising a frame provided 35 with a handle and two gripping members each pivotably journaled on the frame (1) by means of parallel joints which are spaced from each other, the gripping members (2, 3) are overlapping each other in a closed position and said device also 40 comprising a manually operated mechanism connected to the gripping members by means of a link system to pivot the gripping members between a closed position in which edges of the gripping members lie substantially adjacent each 45 other or are overlapped and or open positions.

- In order that the invention may be more readily understood and so that further features thereof may be appreciated, the invention will now be described by way of example with reference to the 50 accompanying drawings in which:

Figure 1 is a perspective view of a sanitary device in accordance with the invention,

- Figure 2 shows the sanitary device of Figure 1 from its lefthand end and with some parts in 55 section, and

Figure 3 shows the sanitary device, with a plastic bag, ready for use.

- The sanitary device shown in the drawings is a preferred embodiment of the invention and 60 comprises a frame 1 with two excreta gripping members 2, 3, constituted by curved sheets pivotably mounted with respect to each other, each member having a free edge section 4, 5 arranged below and at a distance from the

- 65 pivoting axis of the member. In this case the frame 1 comprises a housing or casing with two opposite end walls 6, 7 spaced from each other and two vertical side walls 8, 9 extending between said end walls and a semi-cylindrical top wall 10 70 formed in one piece with said side walls 8, 9. Said gripping members are pivotably journaled on the side walls along the lower, longitudinal edges 11, 12 of the side walls, i.e. the edges of the frame, by means of a piano-hinge joint 13 to form said 75 pivoting axis for each gripping member. These hinges and their pivoting axes are thus parallel to and spaced from each other.

- The gripping members are curved inwardly, substantially resembling a piece of a cylinder with the convex surface facing outwardly, i.e. the 80 convex surfaces facing away from each other, the free edge parts 4, 5 of the gripping members being arranged to overlap each other substantially beneath the centre line of the frame 1 in a closed position of the device as shown in Figure 1, and to 85 be spaced to a distance from each other in the open position, as shown in Figure 2 when the gripping members have been pivoted about the separate hinges, there being a considerable 90 distance between said hinges. Thus, in the open position the free edges 4, 5 are each outside or beyond a vertical line through the respective hinge 13.

- From the frame 1, or more exactly from the end 95 walls 6, 7 two shafts 14, 15 extend upwardly, with a handle 16 extending between them. The handle is thus arranged at a distance from the frame 1 to provide a desired space therebetween. The shafts are formed in one piece with each end wall and may, if desired, be longer than shown in 100 the drawings, the other relevant structural components described below being correspondingly extended.

- The sanitary device also comprises an 105 operating mechanism 17 to open and close the gripping members in the desired manner. The operating mechanism is connected to the gripping members by means of a link system and designed to convert a linear movement to an oscillating 110 movement of the gripping members. For this purpose the link system comprises a vertical rod 18, flat in shape for instance, which is passed through an aperture in the handle 16 and then extends through an aperture in the top wall 10 of 115 the housing and into the space 19 inside the housing where it is guided through a transverse holder 20 which is secured to or formed in the inside of the end wall, 7. The lower end of the rod has a pin 21 on which two link arms 22, 23 are 120 pivotably mounted each arm extending to the inside of each one of the gripping members. Lug 24, 25 is secured to each gripping member and has a pin 26, 27 which pivotably connects the opposite end of the relevant link arm 22, 23 to the 125 respective lug 24, 25.

The aperture at the end of the handle 16 serves to guide the rod 18 when this is moved in its longitudinal direction up and down. The rod extends close to one of the shafts, i.e. the shaft

15, and is bent at the upper end to form an angle piece 28 parallel with the handle 16. This angle piece serves as a pressure plate for the thumb, for instance, as well as a stop against the handle to prevent the rod 18 from being pushed down further than desired. An inwardly directed element 29 is also arranged on the rod 18 below and located close to the handle 16, in the closed position of the gripping members 2, 3, said element 29 acting as finger grip to move the rod 18 upwardly from the lower position that it occupies when the gripping members are open.

The space 19 inside the body is designed to hold a supply 30 of flexible bags 31 of suitable and desired dimension, these bags forming a continuous web and being preferably of a suitable plastics material. The plastic bags are preferably stored in the form of a roll 32 having an axial opening therethrough to receive a pin 33 for rotatable mounting said bag roll in the housing. One end, i.e. the outer end, of the pin 33 is provided with a screw head 34 while the other end, i.e. the inner end, is provided with threads to allow the pin to be screwed into a screw hole 35 in said holder 20. A hole for insertion of the pin into the housing is of course arranged in the opposite end wall 6.

The sanitary device shown in the accompanying drawings and as described above is used in the following manner. It is assumed that a roll 32 of plastic bags is retained in the housing by means of the journalling pin 33 about which the roll of bags can turn. The device is opened by applying a pressure with the thumb on the pressure piece 28 so that the rod 18 is pressed downwardly thereby swinging the gripping members 2, 3 into their outer positions as shown in Figure 2 and thus the space 19 in the housing between the gripping members becomes accessible. The free end 36 of the endmost plastic bag 31 of the roll 32 is thus accessible and can be gripped and pulled a suitable way out of the device, preferably slightly more than the height (width) of the gripping members. This free portion 38 of the plastic bag, extending outside the device is then folded back around the gripping members as shown in Figure 3. The inner space 37 of the bag 31 is thus automatically opened and accessible without the bag having to be specially shaped with the hands. When excrement is to be picked up, the device is placed over it in the open position shown in Figure 3, and then the inwardly directed finger element 29 is gripped to pull up the rod 18, at the same time closing the overlapping gripping members 2, 3 which thus grip the plastic bag 31 with the excrement enclosed therein. The folded portion 38 of the plastic bag is then pulled down and this free bag opening, which has thus not been in contact with the excrement at all, is tied with a piece of thread or some other suitable means efficiently to seal the plastic bag. This free end portion, which is now closed and uncontaminated, may then be inserted into the device if desired by first opening and then closing it again. When desired, for instance after exercising the dog, the device is

again opened and the plastic bag contained therein is pulled out to a transverse perforated line along which the bag can be separated from the supply roll and then disposed of. The device is then ready to be used again in the manner described without having to be cleaned since it has not been contaminated by the excrement in any way.

The operating mechanism may also include a suitable spring member which keeps the clawlike overlapping gripping member in the closed position. A compression spring may thus be arranged between the finger element 29 and the top wall 10 of the housing or a tension spring may be located between the handle and said finger element, said compression spring or tension spring forcing the rod 18 to remain in its upper position. To open the device the rod 18 is thus pushed down against the spring force which spring force thus helps to close the gripping members when the pressure on the pressure plate 28 is released.

It will be understood that the plastic bags or bags of other material must be sufficiently wide to allow the opening to be folded over the gripping members even if these are almost fully open.

The sanitary device in a modified form may also be adapted to be used with separate plastic bags, i.e. without a roller supply in the housing. In this case before excrement is picked up the closed end portion of the plastic bag should be inserted into the opened device, the outer edges being folded back in the manner described with the gripping members closed, or partly or fully opened.

The operating mechanism may be designed in many ways within the scope of the invention. For instance a pair of link arms might be arranged on the opposite side of the gripping members and housing, to be operated by the same rod or their own rod extending vertically up through the housing. This second rod may be connected to the first rod via a connection element replacing the finger element shown and possibly even the pressure plate of the rod 18. The gripping members shown here are open at the sides. However, if desired, side walls may be arranged on the gripping members so that said side walls and gripping members form a substantially closed space.

When in its lowermost position the lower end of the rod is located so that its pin 21 is not lower than the notional connection line between the pins 26, 27 of the gripping members but is on or above this line (see Figure 2).

The sanitary device may be made of any suitable material, such as sheet metal or plastics material.

CLAIMS

1. A sanitary device for picking up animal excrement in a bag, said device comprising a frame provided with a handle and two gripping members, each pivotably journalled on the frame (1) by means of parallel joints which are spaced from each other the gripping members (2, 3) are

- overlapping each other in a closed position and said device also comprising a manually operated mechanism connected to the gripping members by means of a link system to pivot the gripping members between a closed position in which edges of the gripping members lie substantially adjacent each other or are overlapped and or open positions.
2. A sanitary device according to claim 1, wherein said link system comprises at least one guided rod extending from the vicinity of the handle and two link arms which are each pivotably connected to the lower end of said rod and also to a respective one of the gripping members, a linear movement of the rod causing a corresponding pivoted movement of the gripping members about said parallel joints.
3. A sanitary device according to claim 2, wherein a rod extends through the handle the upper part of the rod being provided with pressure plate parallel to the handle allowing the rod to be pushed downwardly towards the handle and an inwardly directed finger element on the rod between the handle and the frame (1) to allow the rod to be pulled upwards towards the handle.
4. A sanitary device according to any one of the preceding claims wherein the said parallel joints are hinges.
5. A sanitary device according to any of the preceding claims, wherein the frame is provided with an elongate journalling pin which is substantially parallel to the gripping members and their said joints and which is arranged to carry a supply of bags arranged to be successively fed between the gripping members.
6. A sanitary device according to any of the preceding claims, wherein the frame comprises a housing with opposite end walls and side walls, the said joints and said gripping members being arranged at the lower edges of said side walls, the housing forming an inner space to receive a supply of bags.
7. A sanitary device in accordance with any one of the preceding claims in combination with a supply of bags.
8. A sanitary device substantially as herein described with reference to and as shown in the accompanying drawings.
9. Any novel feature or combination of features disclosed herein.